

### **REMARKS/ARGUMENTS**

Following amendment, 25 total claims (claims 1, 3- 16, and 18-27) and 3 independent claims (claims 1, 15, and 25) remain in this application. Specifically, Applicant has cancelled claims 2 and 17 and added new claims 26 and 27. The claims have been amended to clarify the subject matter of the present invention, to place the present application in better condition, and to correct minor errors in the claims. Applicant are also amending the Abstract to better conform with the requirements of MPEP §608.01(b). Applicant believes that the present Amendment adds no new subject matter and respectfully request the entering of this Amendment.

#### **Claim Objections**

The Office Action acknowledged that original claims 2 and 17 (now cancelled) are directed to allowable subject matter. While Applicant believes that the prior art references cited in the Office action neither taught nor suggested the present invention as originally claims, the Applicant has amended the claims accordingly to expedite the examination of the present application and the eventual issuance of a resulting patent. Specifically, Applicant has cancelled original claim 2 and 17 and incorporated the limitations originally contained therein into independent claims 1 and 15, respectively. Similar amendment has also been made to claim 25.

#### **Claim Rejections**

Each of the grounds for claim rejections are now addressed below.

#### **35 USC §101**

The Office action rejects claims 15-24 under 35 USC §101. Specifically, the Office action maintains that the claimed invention is directed to non-statutory subject matter. Applicant has carefully reviewed claims 15-24, 35 USC §101, various sections of the MPEP (such as §§706.03(a), 2106-2106.02, and 2107), as well as relevant case law regarding the current scope of patentable subject matter. Following this review, Applicant respectfully disputes (1) the standard for 35 USC §101 being applied by the Office action and (2) the conclusions reached by the Office action in applying this faulty standard of review.

With respect to the standard for 35 USC §101, the Office action states that a claimed invention must fall within the technological arts. Specifically, the Office action states the “present invention does not use or effect technology to perform the claimed method” of claims 15-24. This limitation is not found in the by 35 USC §101, which permits patents to be granted for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” Thus, a new and useful process, such as those provided in the present invention, constitutes patentable subject matter. As defined in 35 USC §100, “the term ‘process’, means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.” As reiterated in MPEP §2106, the Supreme Court has held that the expansive language of 35 USC §101 is intended to include “anything under the sun that is made by man.” Diamond v. Chakrabarty (“Chakrabarty”), 447 U.S. 303, 308-09, 206 USPQ 193, 197 (1980). This expansive interpretation of 35 USC §101 is likewise embraced by the Federal Circuit:

The plain and unambiguous meaning of section 101 is that any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may be patented if it meets the requirements for patentability set forth in Title 35, such as those found in sections 102, 103, and 112. The use of the expansive term “any” in section 101 represents Congress's intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in section 101 and the other parts of Title 35. . . . **Thus, it is improper to read into section 101 limitations as to the subject matter that may be patented where the legislative history does not indicate that Congress clearly intended such limitations.**

In re Alappat, 33 F.3d at 1542, 31 USPQ2d at 1556 with emphasis added.

Applicants strongly urge that Congress has never indicated in anyway that patentable subject matter, as defined by section 101, should be limited to processes “that use or effect technology.” Instead, any **novel and useful** process is patentable subject matter. Thus, the emphasis of an analysis of an invention under section 101 must address that invention’s usefulness and novelty. Well-established categories of nonpatentable materials are natural phenomena (which exist intrinsically and are thus lack novelty) and abstract ideas or laws of nature that constitute descriptive material (which lack a practical application and thus lack utility). The Applicant believes that the present invention, when evaluated in terms of the novelty and usefulness, represents patentable subject matter. Specifically, the claims 15-16 and 18-24 provide a novel method for achieving a useful result in the form of a concrete schedule for optimally allocating a supply of critical material components and manufacturing

capacity. It should be noted that Applicant is not seeking to patent the abstract ideal of an optimal allocation schedule (which would be neither useful or novel) or the mere use of a computerized method to create an optimized schedule (which would be non-novel). In particular, other algorithms, such as trial and error, may be used to form an optimized allocation schedule and these algorithms would not fall under the scope of the claims 15-16 and 18-24. Furthermore, these other methods may produce optimized allocation schedules that differ substantially from the results produced using the method of the present invention.

While MPEP §2106(IV)(B)(2)(b)(ii) states that a process claim covers patentable subject matter if it is limited to a practical application in the technological arts, this language is meant to be inclusionary and not exclusionary. In other words, this section of the MPEP provides a basis for finding that a patent claim contains allowable subject matter and does not provide an express test for limiting claim scope. For instance, a claim for a computer-related process that falls within one of the safe harbors discussed in MPEP §2106(IV)(B)(2)(b)(i) would be allowable subject matter, even if that computer-related process did not have a practical application in the technological arts. Exclusion, as discussed in MPEP §2106(IV)(B)(1), should be limited to claims toward subject matter lacking novelty or utility.

However, even if the Office action's standard for patentable subject matter is used, Applicant believes that the present invention, as embodied in current claims 15-16 and 18-24, should overcome a rejection under 35 USC §101. In particular, MPEP §2106(IV)(B)(2)(b)(ii) provides that "A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful." As the Federal Circuit held in Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F. 3d 1368, 1373, 47 USPQ2d 1596, 1601-02 (Fed. Cir. 1998),

the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result' - a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.

As described above, the present invention similarly provides an algorithm in claim 15 and its dependent claims that produces the express practical application of forming a useful, tangible, and concrete supply plan. The supply plan is useful for minimizing inefficient resource scheduling. Furthermore, the supply plan may be represented in a permanent manner (e.g.,

the plan may be visually displayed), and execution of the supply plan results in real changes in a production facility.

In conclusion, Applicant believes that this ground for rejection has been overcome and that current claims 15-16 and 18-24 should be allowed for these and other reasons described below.

### 35 USC §102

The Office action further rejected claims 1, 3-4, 6-16, and 18-25 under 35 USC §102(b) as being anticipated by the Mathur and Solow reference. Applicant respectfully disagrees with this finding that the Mathur and Solow reference teaches the use of synchronized allocation to develop a supply plan as described in the present application. However, Applicant wishes to expedite the examination and eventual allowance of the present application and has incorporated the limitations of original claims 2 and 18 into the independent claims 1, 15, and 25 to clarify the novelty aspects of the present invention. Applicant reserves the right to file a continuation application prior to issuance to pursue the original scope. It is believed that current claims 1, 3-4, 6-16, and 18-25, as amended, may be clearly distinguished from the Mathur and Solow reference. Thus, Applicant suggests that this ground for rejection has been overcome and that these claims should now be allowed.

### 35 USC §103

The Office action further rejected claim 5 under 35 USC §102(b) as being obvious and unpatentable over the Mathur and Solow reference in view of the Vollmann, Berry, and Whybark reference. Applicant has carefully reviewed the Vollmann, Berry, and Whybark reference and find that it neither teaches or suggests the defining of components using engineering specification, as described in the Smartbill of the present invention. Instead, the Vollmann, Berry, and Whybark reference describes the use of a "superbill." As described on page 227 of the Vollmann, Berry, and Whybark reference, the superbill represents an average, fictional product that is for the purpose of production planning, rather than the addressing manufacturing needs of multiple separate products. Thus, the superbill appears to have little relevance to the smartbill of the present invention, as embodied in claim 5 and new claim 26.

Furthermore, as discussed above, Applicant is amending independent claim 1 and 25 in order to clarify the differences between the present invention and the teachings of the

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Mathur and Solow reference. It believed that claims 1 and 25 are now allowable, and thus, the claims depending therefrom should also be allowed.

Conclusion


In view of the foregoing, the Applicants respectfully request that the Examiner considers the above-noted amendment when the application is examined on its merits and the timely allowance of the pending claims. The Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1349.

Respectfully submitted,

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